### **Project Manager/COTR START** Determine if an unique application of stocklisted items or unique explosive Objectives devices Unique Yes application or explosive levice? No Refer to DOP-O-010 ¥ **END Explosive Safety Officer** Inform Explosive Inform Program Safety Officer Manager of Code S & e-mail Explosives Devices Life Support Code Requirements to O courtesy include, but not information limited to: -Q-17 -personnel training Provide explosives requirements supplier with -disposition of Quality Attachment explosives Q-17 along with -fund site for Purchase Request disposition in the case of (See Note 3) unique devices Life Support Receive Q-17 from Verify technical supplier and inform data on Q-17 **Explosive Safety** (See Note 1 Officer and Life ref: 1, 2) Support Ís Q-17 Yes properly filled Arrange for Ensure project out? **Explosive Handling** technicians attend and Transportation required explosive No Training of project safety courses personnel Inform supplier of required information or **END** changes

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# Explosive Devices Acquisition, Control, and Disposition

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- -ensure explosive safety is practiced by all personnel involved in explosive handling, storage or transportation
- -ensure Life Support is properly notified to allow storage of Project Ballistic Items
- -ensure all personnel adhere to explosive policies and procedures
- -to ensure uniform procurement and disposition of explosive devices

Electronically Approved By: Associate Director

## Note 1:

- 1. NASA Attachment Q-17: Identification, Marking and Shipping Requirements for Pyrotechnic Article Procurement
- 2. Air Force/Navy Technical Data or Material Safety Data Sheet
- 3. DOP-0-010 Life Support Systems SOP
- 4. Life Support Technicians Training & Experience
- 5. Project Technicians Training Records & experience
- 6. DOP-0-003 Receipt and Storage of NASA Explosives
- 7. DOP-O-400 Aerospace Vehicle/Fixture Maintenance
- 8. NASA Form OF-12: Issue or Turn-in of Explosive Devices
- 9. NASA Explosives Safety Standards Manual NSS 1740.12
- 10. DFRC Form 741 (Yellow Serviceable Tag)

#### Note 2:

In the case of conflicting technical data concerning storage, shipment, handling, or maintenance on explosive devices or components, the most stringent requirements will be observed.

## Note 3:

All unique explosive devices, regardless of explosive weight, function or physical location, must have a Q-17

completed prior to shipment to Edwards AFB or the Dryden Complex. This is to ensure the appropriate emergency response teams (Fire Dept, EOD, Crash & Rescue, etc.) have complete and comprehensive technical data available.

CHECK THE MASTER LIST at
http://xnet.dfrc.nasa.gov/iso9000/
VERIFY THAT THIS IS THE CORRECT VERSION BEFORE USE
PRINTED DOCUMENTS ARE FOR REFERENCE ONLY

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**END** 

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## This Instruction Establishes Safety Requirements, Procedures And Training Requirements For Aerospace Vehicles Explosive Devices.

- 1. <u>Applicability:</u> This instruction applies to all personnel assigned to inspect or perform explosive maintenance, storage, handling or transportation on NASA-Dryden Aerospace Projects or any project physically located on the Dryden complex utilizing Dryden equipment, facilities, or personnel.
- 2. Responsibilities: All Project Managers, COTR's, Hosts and Branch Chiefs of personnel as defined in item1 above shall ensure compliance with this instruction and associated relevant documents contained in this instruction. All operating procedures, instructions, directives and purchase requests involving explosives shall be submitted to the DFRC Unit Weapons/Explosive Safety Officer for review and approval. Purchase requests involving explosives will be reviewed and quality requirements will be addressed, including quality attachment Q-17 ("Identification, Marking and Shipping Requirements for Pyrotechnic Article Procurement")-(See QA Office for current version of Q-17).
- 3. <u>Training Requirements:</u> All personnel assigned to inspect or perform explosive maintenance, storage, handling or transportation will be trained on proper handling techniques for explosives as stated below:
  - A. Explosives safety & handling procedures will be conducted by USAF Explosive Ordnance Disposal personnel from the 95 CEG/CED with annual recertification. Certification of Explosive Handling from other agencies or centers will be accepted as valid
  - B. Explosives transportation training will be conducted by the 412 EMS Munitions Transportation Office with annual recertification. This training will be held regardless of off-site certification.
  - C. Certification of training will be maintained by the Quality Assurance Office with a list of authorized personnel given to the Life Support Group Lead.

It will be the responsibility of each supervisor to maintain adequate records of training and to see that the Unit Weapons/Explosive Safety Officer receives a copy of completion for his records. The Unit Weapons/Explosive Safety Officer will perform random audits of employee's training records for verification. For each employee's certification to stay current the explosive safety training elements must be accomplished at least once a year and be accomplished to the satisfaction of his/her supervisor. The supervisor is responsible for rescinding certification if the need arises. Notification of such rescission must be given to the Unit Weapons/Explosive Safety Officer.

- 4. <u>Safety Requirements:</u> All personnel involved in explosive maintenance or transportation will strictly adhere to established policies and procedures to include the following:
  - A. All explosive devices will be safetied, capped or plugged at all times when not installed on the particular project vehicle.
  - B. Explosive devices removed from one system will not be co-mingled with devices removed from another system. Explosive items will only be stored in Explosive Facility Storage Locations that have been approved by AFFTC/SEW.

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C. All items removed from a vehicle will be tagged with the appropriate identification data and project Name/Number using DFRC Form 741, and stored in approved area's.

- D. During explosive maintenance, no unnecessary personnel will be allowed in the maintenance area. No Hydraulic or Electrical Power, nor cooling air will be applied to the vehicle. All danger area's will be clearly marked.
- E. All explosive maintenance performed will be accomplished with a minimum of one designated inspector, one technician and proper technical data or checklists for the particular project vehicle, and pertinent technical data as provided by the mfg. for each explosive device. Explosive maintenance will be performed in an approved area per the Aircraft Maintenance & Safety Manual.
- 5. <u>Issue and Turn-in of Explosive Devices</u> Issue and turn-in of explosive devices to or from personnel other than Dryden Life Support will be accomplished per the following steps.
  - A. All personnel must be certified with Life Support & Quality Assurance to be authorized to handle, transport, or maintain project explosive systems.
  - B. Transportation of explosive devices shall be in accordance with United States Air Force Manual (AFMAN) 91-201, Explosive Safety Standards, Chapter 6 and the NASA Explosive Safety Standards Manual, NSS 1740.12, Chapter 9. Transportation of explosive items will only be accomplished by qualified personnel and vehicles will only travel on routes approved by AFFTC/SEW. Explosive items will not be transported off of EAFB unless proper training has been received and complies with all requirements identified in title 49 CFR Hazardous Materials Regulation, Transportation.
  - C. Prior to Issue or Turn-in of items from Life Support, notification must be made to Life Support no later than 24 hours in advance.
  - D. All explosive devices being turned in to Life Support must be accompanied by the DFRC Form 741, stating condition and disposition of the item.
- 6. <u>Dryden Form OF-12</u>. This form is used to document issue and return of explosive items either for storage or further disposition.
  - A. Issued By: Enter the name of the issuing Life Support Technician as authorized by the Life Support Group Lead.
  - B. Date: Enter the Date the item is being issued
  - C. Part No.: Enter the part number as identified on the Q-17 provided by the Program Manager for the part being issued. If there is a change in the part number, a new Q-17 must be issued to reflect the new part number. If more than one part number is being issued, a separate entry is required.
  - D. Lot No.: Enter the Lot Number of the item being issued. If more than one lot number is being issued, a separate entry is required

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E. Qty/Serno: Enter either the quantity of the items being issued in the case of non-serialized items, or the serial number of the item being issued. If more than one serialized item is being issued, a separate entry is required for each serial number. Exceptions--in the case of serialized explosive devices that are tracked in NALCOMIS by Dryden Life Support, only the quantity of items needs to be recorded.

- F. Issued to: Enter the Project name or Tail Number and print the name of the person receiving the item. This person must be listed on the Authorization to Draw or Return Explosives.
- G. Inits: The receiving project technician will initial here to acknowledge receipt of the explosive device.
- H. Rec'd by/Date: The receiving Life Support technician will sign and date this block only after verifying all DFRC Form 741's are correctly filled out, with disposition instructions, and accompany the item being returned.